

REMARKS

This amendment is submitted in response to the final Office Action mailed on February 7, 2005. Claims 1-24 are pending in this application. In the Office Action, Claims 1-24 are rejected under 35 U.S.C. §112, first paragraph and Claims 1-24 are rejected under 35 U.S.C. §103. In response Claims 1, 4, 6, 11, 14-15 and 21 have been amended, and Claims 2, 9 and 19 have been canceled. These amendments do not add new matter. In view of the amendments and/or for the response set forth below, Applicants respectfully submit that the rejections should be withdrawn.

In the Office Action, Claims 1-24 is rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Specifically, the Patent Office alleges that the specification does not support the phrase "three distinct compounds" either explicitly or implicitly. In response, Claims 1, 6 and 15 have been amended to use cetylpyridinium chloride as the surfactant.

Applicants respectfully submit that there is a basis for one having ordinary skill in the art to distinguish between surfactants and emulsifiers according to the present claims. For example, a surfactant is a surface active agent such as a soap or detergent, which can also be used as a wetting agent. This is needed to make an antimicrobial more effective by allowing the antimicrobial to spread more evenly over the surface of the teeth. On the other hand, an emulsifier is a material that emulsifies water and oil soluble materials and allows them to mix and stay together as a mixture without separating.

Although surface active agents and emulsifiers share similar qualities, a distinction according to the present claims is that some surface active agents have better properties as surfactants than as emulsifiers and some emulsifiers have better properties as emulsifiers than as surface active agents as defined above. For example, cetylpyridinium chloride of the present claims is used as a surface active agent more than an emulsifier. Further, lecithin, which as an example is more of an emulsifier than a surface active agent, may be added as an emulsifier distinct from that of the surfactant cetylpyridinium chloride in accordance with the present claims.

Based on at least these noted reasons, Applicants believe that Claims 1-24 fully comply with 35 U.S.C. §112, first paragraph. Accordingly, Applicants respectfully request that the rejection of Claims 1-24 under 35 U.S.C. §112 be withdrawn.

In the Office Action, Claims 1-5, 15, 19-21 and 23 are rejected under 35 U.S.C. §103 as being unpatentable over WO 95/17159 to Hall ("*Hall*"). Claims 1, 6-8, 12-18 and 22 are rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 5,380,530 to Hill ("*Hill*"). Claim 24 is rejected under 35 U.S.C. §103 as being unpatentable over *Hall* in view of U.S. Patent No. 5,472,685 to Gaffar ("*Gaffar*"). Claims 6 and 9-11 are rejected under 35 U.S.C. §103 as being unpatentable over *Hill* in view of *Hall*. Applicants believe these rejections are improper and respectfully traverse them for at least the reasons set forth below.

Amended independent Claims 1, 6 and 15 recite, in part, an anti-plaque emulsion comprising a liquid mixture comprising three distinct compounds comprising an emulsifier; triclosan; and cetylpyridinium chloride. Applicants respectfully submit that all of the claimed elements are not taught or suggested by the cited references.

With respect to independent Claims 1 and 15, *Hall* fails to disclose a mixture having an emulsifier, triclosan and cetylpyridinium chloride. As discussed above, an emulsifier and a surfactant such as cetylpyridinium chloride are distinguishable in their qualities and objectives for use in various embodiments of the present claims. Indeed, *Hall* fails to disclose or suggest an emulsifier specifically as used according to the present claims. In addition, the Patent Office's assertion that cetylpyridinium chloride is an emulsifier still fails to meet the limitation of the present claims involving, in part, an emulsifier compound that is distinct (e.g. different) from the surfactant cetylpyridinium chloride. Thus, *Hall* fails to disclose or suggest a liquid mixture comprising three distinct compounds of an emulsifier, triclosan and cetylpyridinium chloride. Consequently, Claims 2-5, 19-21 and 23-24 which depend from Claims 1 and 15 and therefore contain all of its limitations are also patentable at least for the same reasons as Claims 1 and 15.

Similarly, with respect to independent Claims 1, 6 and 15, *Hill* fails to disclose or suggest a mixture comprising three distinct compounds comprising an emulsifier, triclosan and cetylpyridinium chloride. Moreover, *Hill* fails to provide any motivation for that specific combination. For example, *Hill* fails to disclose or suggest any mixture comprising an emulsifier AND triclosan AND cetylpyridinium chloride as required by the present claims. Although the

Office action indicates that *Hill* discloses the combination of certain surfactants and/or emulsifiers at col. 13, line 49, the referenced passage is limited to such mixtures as being advantageous when used in combination with polydimethyl siloxanes for use in coating teeth and oral surfaces to form smooth surfaces that interfere with plaque adherence. It is not apparent from this passage that there any suggestion to use the same mixtures with chemically distinct compounds such as triclosan (a derivatized diphenylether compound) and cetylpyridinium chloride so as to provide the novel anti-plaque mixture of Applicants' present claims. Further, *Hill* is entirely directed to the using the surfactant/polydimethyl siloxane mixture in a gum coating, which teaches away from the use of the claimed emulsion in the water soluble portion of the chewing gum as required by Claim 6. See, *Hill*, column 13, lines 49-52. Consequently, Claims 7-8, 12-14, 16-18 and 22 which depend from Claims 1, 6 and 15 therefore contain all of its limitations are also patentable at least for the same reasons as Claims 1, 6 and 15.

Claims 6 and 9-11 were rejected under 35 U.S.C. 103(a) as unpatentable over *Hill* in view of *Hall*. Applicants submit that Claim 6 and Claims 9-11 that depend from Claim 6 are patentable over the combination of *Hill* with *Hall* for the reasons set forth above with respect to *Hill* and *Hall*. Namely, *Hill* does not disclose a mixture of three compounds comprising an emulsifier, triclosan and cetylpyridinium chloride in the water soluble portion of the chewing gum as required by Claim 6. *Hall* provides no more suggestion than *Hill*, alone or in combination, for a water soluble portion including an emulsion comprising three distinct compounds comprising an emulsifier, triclosan, and cetylpyridinium chloride.

For the reasons discussed above, *Hall*, *Hill* and *Gaffar*, or any combinations thereof, do not teach, suggest, or even disclose the present claims, and thus, fails to render the claimed subject matter obvious for at least these reasons.

Accordingly, Applicants respectfully request that the obviousness rejections with respect to Claims 1-24 be reconsidered and the rejections be withdrawn.

For the foregoing reasons, Applicants respectfully request reconsideration of the above-identified patent application and earnestly solicit an early allowance of same.

Respectfully submitted,

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